IADR General Session and Exhibition, March 9-13, 1994, Seattle, WA
**Deadline for Submission: September 24, 1993**

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*Type perfect original of abstract here:*

*In Vitro* Synthesis of Mutagens by Periodontally-associated Bacteria. MILLICENT C. GOLDSCHMIDT* Ruby Grant (Dental Branch, U. Texas Houston Health Science Center, Texas, USA) Oral microorganisms contribute mutagens involved in colon and other cancers. No one has investigated mutagen synthesis by periodontally-associated bacteria. We isolated these bacteria from 17 otherwise healthy patients in our periodontics clinics (DBPC) and compared them with 5 cancer patient's isolates from U. TX MDA Cancer Centr., Dept. Dental Oncology (DDO). Bacteria, collected by curette or paper point and resuspended in 2 ml prereduced (PR) Oxoid broth, were streaked to isolation on PR Columbia blood agar. Sterile filtrates, from the isolates of 191 cultures grown 48h in PR Oxoid broth with 0.05% $NaNO_3$ or 0.05% $NaNO_2$, were tested in the Ames' mutagen assay (Mut. Res: 113, 173, 1983)(at 0.05ml/disk) using Salmonella typhimurium TA-100 tester strain. Increased numbers of revertants or zones around the disks compared to various controls indicated mutagen production. 45% of the DBPC cultures synthesized mutagens causing 30 to 40 more revertants or zones (23%). 57% of the DDO cultures were mutagenic. All produced zones. Mutagens were not characterized. Species of Veillonella, Peptostreptococcus, Capnocytophaga, Actinomyces, Prevotella and Fusobacterium were identified. No differences were noted between $NaNO_3$ and $NaNO_2$ in these assays. Thus: Periodontally-associated bacteria synthesize mutagen *in vitro* when grown in nitrate or nitrate and tested in Ames' assay. The bacteria isolated from the head and neck cancer patients appeared to synthesize either higher concentrations of mutagens or more potent mutagens. All could certainly contribute to the downstream bioburden.

## Information Section

(Type or print legibly in black or blue ink.)

1. Complete name and MAILING ADDRESS of the PRESENTER. Notification of acceptance will be mailed to this address. BE SURE IT IS CORRECT.

Presenter's Name: Dr. M.C. Goldschmidt

In care of: _____
(Students, give cooperating instructor's name.)

Institution/Company: U. TX Houston Health Science Center Dental Branch, Dept. Basic Sci.

Department: _____

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2. Presenter's Daytime 'Phone Number (w/ area code):
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3. Presenter's FAX #: (713) 794-1861

4. Presenter's Membership ID#:
00075965
(Presenters, give your ID# only, not that of your co-author.)

5. Mode of Presentation Preferred (check only one):
(1) X Oral Presentation
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(d) ○ Dental Materials: I—Adhesion & Bonding
(e) ○ Dental Materials: II—Ceramics & Cements
(f) ○ Dental Materials: III—Polymers
(g) ○ Dental Materials: IV—Other
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(i) ○ Experimental Pathology
(j) ○ Geriatric Oral Research
(k) ○ Implantology Research
(l) X Microbiology/Immunology
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8. Was this research supported by NIH? (If yes, print grant number as last line in abstract box.)
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10. List five descriptors by number. *If existing descriptors* do not fit your research, then write one new word under "Other".
(1) 121 (2) 132 (3) 360 (write numbers)
(4) 362 (5) 363
Other mutagenicity
(write one word for future key word list)

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Millicent C Goldschmidt

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13. List cooperating instructor's name
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